

CITY OF CROSSVILLE

99 MUNICIPAL AVE.
CROSSVILLE, TENNESSEE 38555~4477
TEL (931) 484~7060
FAX (931) 484~7713

February 16, 2016

EPA Region 7
Attn: Biosolids Center
WWPD/WENF
11201 Renner Boulevard
Lenexa, Kansas 66219

RE: 2015 Biosolids 503 Report
City of Crossville, TN
Wastewater Treatment Facility – NPDES – TN0024996

Dear Mr. Plymale:

Please find enclosed a copy of our 2015 Crossville Wastewater Treatment Facility Biosolids 503 Report.

If you have any questions, please give me a call at 931-484-6257.

Sincerely,

Clark Annis, Manager
Crossville Wastewater Treatment Facilities
Crossville, TN

cc: Bob O'Dette, Municipal Facilities Section, Nashville, TN
Phillip Simmons, Municipal Facilities Section, Nashville, TN
Karina Bynum, Cookeville Environmental Assistance Center

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FEB 18 2016

**ENVIRONMENT & CONSERVATION
COOKEVILLE FIELD OFFICE**

40 CFR PART 503

2015 ANNUAL BIOSOLIDS REPORT

Facility Name: City of Crossville
Wastewater Treatment Facility
468 Sparta Highway
Crossville, TN 38572
931-484-6257

Facility NPDES Permit Number: TN0024996

Responsible Official: Clark Annis, Manager
468 Sparta Highway
Crossville, TN 38572
931-484-6257

Facility Operator: Clark Annis, Manager
City of Crossville
Crossville Wastewater Treatment Facilities

Dry Tons Biosolids
Generated-Recycled: 2,193 Dry Tons/2015 (Class A Biosolids)

Location of Land Application Sites: Approved Farms in Cumberland County, TN

OPS Data/Testing Calculations
And Lab Methodologies: Analysis conducted by Sherry Laboratories

-In house testing conducted according to EPA and
Standard methods

Description of Sludge Processes: This information is included in the management
practices of the report.

MANAGEMENT PRACTICES FOR CROSSVILLE BIOSOLIDS LAND APPLICATION PROGRAM

The City of Crossville utilizes two 2.0 meter belt filter presses, a roediger mixer, alkaline material storage silo, conveyance system, heat pulse area, and windrow storage.

Waste activated sludge is dewatered to 14-16% total solids and mixed with alkaline material (lime kiln dust) to elevate the pH to greater than 12 and maintain pH for more than 72 hours. Temperature is maintained well above 52°C for a minimum of 12 hours during the time that the pH is greater than 12. Biosolids (N-Viro Product) is then hauled to our 100,000 sq. ft. paved storage area and windrowed and allowed to bulk dry to over 50% prior to hauling to farms for land application.

Biosolids are picked up and hauled to area farms and spread on pasture and hay fields at approximately 6 wet tons per acre which supplies approximately 26 lbs. of nitrogen, 25 lbs. of phosphorus, 23 lbs. of potassium, lime EQ, and other trace minerals. Crossville has a 12 yard Knight Slinger Truck to spread the material. Farmers use trailer spreaders to spread the Biosolids (N-Viro class A) product.

Local farmers are well pleased with our Biosolids. We had (0) complaints in 2015 and there is a long waiting list of farmers who desire to receive our Biosolids. 100% of Crossville's Biosolids are picked up and spread by farmers.

The value of Crossville's Biosolids to area farmers based on current local fertilizer cost applied at 6 tons per acre is \$134 per acre. Crossville Biosolids applied at 6 tons/acre meets the recommended agronomic application rate for summer annual grass and tall fescue hay crop nitrogen requirements. Crossville's program has a very high public acceptability due to our public education programs and tours of our facilities. The Crossville Biosolids have always been very low in metals, met all microbiological requirements, and been very high in agronomic value to our local farmers.

2015 CROSSVILLE BIOSOLIDS LAND APPLICATION DATA

	<u>Dry Tons, Dry WT Biosolids Generated</u>	<u>Actual 2015 Tons Hauled to Farms N-Viro (Includes LKD)</u>
Jan	107	152
Feb	88	38
Mar	192	589
Apr	156	304
May	194	95
Jun	304	209
Jul	188	190
Aug	211	190
Sep	263	143
Oct	133	133
Nov	159	285
Dec	<u>198</u>	<u>0</u>
Total	2193	2328

Frequency of monitoring for pollutants, pathogen densities, and vector attraction reduction was (6 times per year). An agriculture analysis was also conducted each time.

ALKALINE MATERIAL USAGE 2012

January 2015 – December 2015 497 tons LKD (lime kiln dust)

PATHOGEN REDUCTION ALTERNATIVE

CLASS A

503 Alternative 6 [503.32 (a)(8)(ii)]

N-Viro process equivalent to PFRP

503 Alternative 2 [503.32 (a)(4)]

- pH elevated greater than 12 a minimum of 72 hours
- Temperature maintained greater than 52°C a minimum of 12 hrs at pH greater than 12
- Air dried to at a minimum of >50% solids after the 72 hour period of pH greater than 12
- Density of fecal Coliform in sludge less than 1000 MPN2 per gram total solids (dry wt)

VECTOR ATTRACTION REDUCTION OPTION

Class A

503.33 (b)(6) Option 6

Lime kiln dust is added to raise pH to above 12 for a minimum of 2 hours at above 52°C and pH is maintained greater than 11.5 for 22 more hours. Crossville adds bulk LKD to maintain pH and temperature well above the minimum requirements.

BIOSOLIDS LAND APPLICATION LOCATIONS

Biosolids (N-Viro Soil) were land applied to farm land in Cumberland County on pastures and hay fields at approximately 5-6 wet tons per acre considering agronomic rate for nitrogen.

2015 MONITORING DATA SUMMARY
BIOSOLIDS (N-VIRO) CROSSVILLE, TENNESSEE

Final use/disposal practice – farmland application
 Number of analysis required per year – once per 60 days/6 times/year
 Approved Methods – Yes/lab reports attached
 Required Metals – Yes
 All in Dry Weight – Yes

Analysis	EPA Max Limits	2/25/15	4/27/15	6/29/15	8/25/15	10/27/15	12/21/15
pH, std units		12.1	12.3	12.2	12.2	12.0	12.2
%Total Solids		58.5	79.8	73.6	57.0	95.3	94.5
% Volatile Solids, dry basis		8.69	6.26	6.06	5.48	6.52	5.92
Lab Rating		Fair	Very Good	Very Good	Fair	Very Good	Very Good
Fecal Coliform, MPN/g dry	<1000MPN	<3.4	<2.0	<2.7	<3.5	<2.1	<2.1
Arsenic, MG/KG dry weight	41	5.83	13.0	6.05	7.94	6.38	6.50
Cadmium, MG/KG dry weight	39	<0.391	<0.0310	<0.366	<0.405	<0.258	<0.153
Chromium, MG/KG dry weight		7.74	14.9	11.9	13.8	12.0	11.5
Copper, MG/KG dry weight	1500	23.2	30.5	5.40	52.1	23.8	23.1
Lead, MG/KG dry weight	300	6.78	11.0	6.90	9.42	9.53	8.48
Mercury, MG/KG dry weight	17	<0.454	<0.0627	<0.390	<0.470	<0.299	<0.0790
Molybdenum, MG/KG dry weight		2.39	2.85	2.80	3.90	2.44	2.39
Nickel, MG/KG dry weight	420	16.1	10.5	18.0	23.2	13.9	14.9
Selenium, MG/KG dry weight	36	3.98	6.44	4.63	4.97	3.68	3.16
Zinc, MG/KG dry weight	2800	74.4	51.5	94.5	213	58.9	65.3
Agriculture Analysis, dry WT							
TKN-N lbs/ton		2.8	1.67	7.6	6.9	2.8	3.17
NH3 lbs/ton		0.126	0.02	0.05	0.50	0.007	0.03
Phosphorus, lbs/ton		2.4	2.0	6.29	7.5	2.0	2.75
Potassium, lbs/ton		1.2	2.25	3.27	2.94	1.3	2.38
Ag-lime EQ (%) dry basis		94.2	74.7	65.1	49.3	77.4	79.2

All samples 2015 – Element Materials Technology

Certification Statement for Pathogen Requirements

"I certify under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirement in 503.32(a)(4) Alternative 2 and the vector attraction reduction requirements in 503(b)(6) was prepared under my direction in supervision and in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware there are significant penalties for false certification including the possibility of fines and imprisonment."

Signature 

Date February 16, 2016

2015 N-Viro Biosolids Recycling Program Crossville Wastewater Treatment Facilities

Cost/Dry/Product Produced Ton N-Viro (Biosolids)

Tons (Alkaline Material Lime/LKD added)	522
Dry Tons Biosolids Generated	1,813
Polymer 620 tons @ \$49/ton	\$ 30,380
Alkaline (LKD) 497 Tons @ \$48.72/ton	\$ 24,213
Labor 40 hours/week	\$ 37,925
Electric/Water/Natural Gas	\$ 18,000
Fuel	\$ 650
Analysis (503)	\$ 0
	<u>\$112,896</u>

$\$112,896/2,328 = \$48/\text{wet ton Biosolid/lime ratio dry WT } 30\% \text{ LKD } 70\% \text{ Biosolids}$

Total Annual Agriculture Value N-Viro

(Fertilizer/lime value based on January 2014 cost)

Nitrogen	6 tons @ \$588/ton	\$ 3,528
Ag lime EQ	1,600 tons @ \$24/ton	\$ 38,421
Phosphorus	4.1 tons @ \$714/ton	\$ 2,927
Potassium	2.4 tons @ \$945/ton	\$ 2,268
Trace Minerals	10 tons @ \$42/ton	\$ 420
		<u>\$ 47,564</u>

Value of N-Viro Biosolids to Farmer

(Distributed at 6 tons/acre)

Nitrogen	28 lbs @ \$.29/lb	\$ 8.12
Phosphorus	23 lbs @ \$.35/lb	\$ 8.05
Potassium	25 lbs @ \$.46/lb	\$ 11.50
Ag lime EQ	4.4 tons @ \$24/ton	\$105.60
Trace Minerals (magnesium, sulfur, zinc) @ \$.20/lbs		\$ 1.00
Total value		<u>\$134.27/acre</u>

Crop Nitrogen Requirements (Consult UT Agriculture Extension Service)

<u>Crop</u>	<u>Expected Yield</u>	<u>Nitrogen Requirement (lbs N/acre/year)</u>
Corn (grain)	100-125 bu	120
Corn (silage)	125-150 bu	150
Summer Annual Grass	6 tons (1 cutting)	60-120
Tall Fescue Hay	3 tons (2 cuttings)	120
Orchard Grass Hay	4 tons (2 cuttings)	60-120

More Information

Crossville Biosolids won the **KYTN WEA Biosolids Beneficial Reuse Award 1998, 2003, 2006, 2010, 2013**

Crossville N-Viro fertilizer meets all EPA 503 Exceptional Quality (EQ) Biosolids Class A Criteria
Crossville Wastewater Treatment Facilities 931-484-6257

N-Viro International Corporation 419-535-6374 or 1-800-666-8476 or visit Web Site www.nviro.com
Crossville member of **National Biosolids Partnership (EMS)** 703-684-2418 www.biosolids.org

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 01/01/15 to 01/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
01/01/15						
01/02/15						
01/03/15						
01/04/15						
01/05/15						
01/06/15						
01/07/15			12.5	97	12.5	97.0
01/08/15						
01/09/15						
01/10/15						
01/11/15						
01/12/15						
01/13/15			12.6	100	12.3	94.0
01/14/15						
01/15/15						
01/16/15						
01/17/15						
01/18/15						
01/19/15						
01/20/15						
01/21/15			12.6	99	12.4	96.0
01/22/15			12.6	96	12.5	90.0
01/23/15						
01/24/15						
01/25/15						
01/26/15	4	38.0				
01/27/15						
01/28/15	3	28.5	12.6	100	12.3	98.0
01/29/15	3	28.5	12.5	98	12.2	90.0
01/30/15	3	28.5				
01/31/15	3	28.5				
Minimum			12.5	65	12.2	90.0
Maximum			12.6	100	12.5	98.0
Total	16	152.0				
Average	3	30.4				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 02/01/15 to 02/28/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
02/01/15						
02/02/15	2	19.0				
02/03/15	2	19.0				
02/04/15			12.1	98	12.1	96.0
02/05/15						
02/06/15						
02/07/15						
02/08/15						
02/09/15						
02/10/15						
02/11/15			12.4	100	12.2	98.0
02/12/15			12.5	98	12.3	86.0
02/13/15						
02/14/15						
02/15/15						
02/16/15						
02/17/15						
02/18/15			12.6	98	12.4	92.0
02/19/15						
02/20/15						
02/21/15						
02/22/15						
02/23/15						
02/24/15						
02/25/15			12.6	82	12.3	78.0
02/26/15						
02/27/15						
02/28/15						
Minimum			12.1	65	12.1	78.0
Maximum			12.6	100	12.4	98.0
Total	4	38.0				
Average	2	19.0				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 03/01/15 to 03/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
03/01/15						
03/02/15						
03/03/15						
03/04/15			12.5	98	12.2	96.0
03/05/15						
03/06/15						
03/07/15						
03/08/15						
03/09/15						
03/10/15						
03/11/15						
03/12/15	4	38.0				
03/13/15						
03/14/15						
03/15/15						
03/16/15	8	76.0				
03/17/15	1	9.5				
03/18/15	4	38.0	12.5	100	12.3	98.0
03/19/15			12.4	98	12.3	90.0
03/20/15						
03/21/15						
03/22/15						
03/23/15	15	142.5				
03/24/15	10	95.0				
03/25/15	17	161.5	12.6	100	12.2	98.0
03/26/15	3	28.5	12.6	98	12.3	
03/27/15						
03/28/15						
03/29/15						
03/30/15						
03/31/15						
Minimum			12.4	65	12.2	90.0
Maximum			12.6	100	12.3	98.0
Total	62	589.0				
Average	8	73.6				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 04/01/15 to 04/30/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
04/01/15			12.5	100	12.3	98.0
04/02/15	10	95.0	12.5	98	12.2	96.0
04/03/15	2	19.0				
04/04/15						
04/05/15						
04/06/15	2	19.0				
04/07/15	1	9.5				
04/08/15			12.4	100	12.3	98.0
04/09/15						
04/10/15						
04/11/15						
04/12/15						
04/13/15						
04/14/15						
04/15/15			12.5	100	12.3	95.0
04/16/15						
04/17/15						
04/18/15						
04/19/15						
04/20/15						
04/21/15						
04/22/15			12.5	87	12.3	79.0
04/23/15			12.4	100	12.3	96.0
04/24/15			12.5	84	12.2	78.0
04/25/15						
04/26/15						
04/27/15	17	161.5				
04/28/15						
04/29/15			12.6	80	12.3	70.0
04/30/15			12.4	70	12.2	66.0
Minimum			12.4	65	12.2	66.0
Maximum			12.6	100	12.3	98.0
Total	32	304.0				
Average	6	60.8				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 05/01/15 to 05/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
05/01/15						
05/02/15						
05/03/15						
05/04/15						
05/05/15	5	47.5				
05/06/15	5	47.5	12.5	100	12.2	98.0
05/07/15			12.4	98	12.2	90.0
05/08/15						
05/09/15						
05/10/15						
05/11/15						
05/12/15						
05/13/15			12.4	99	12.3	96.0
05/14/15			12.6	100	12.2	98.0
05/15/15						
05/16/15						
05/17/15						
05/18/15						
05/19/15						
05/20/15			12.4	98	12.2	96.0
05/21/15						
05/22/15						
05/23/15						
05/24/15						
05/25/15						
05/26/15						
05/27/15			12.5	100	12.3	100.0
05/28/15			12.6	100		
05/29/15						
05/30/15						
05/31/15						
Minimum			12.4	65	12.2	90.0
Maximum			12.6	100	12.3	100.0
Total	10	95.0				
Average	5	47.5				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 06/01/15 to 06/30/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
06/01/15						
06/02/15						
06/03/15			12.6	100	12.3	98.0
06/04/15			12.5	98	12.3	94.0
06/05/15						
06/06/15						
06/07/15						
06/08/15						
06/09/15						
06/10/15			12.4	100	12.2	100.0
06/11/15			12.5	100	12.3	96.0
06/12/15						
06/13/15						
06/14/15						
06/15/15						
06/16/15						
06/17/15			12.6	100	12.2	98.0
06/18/15			12.3	98	12.2	98.0
06/19/15						
06/20/15						
06/21/15						
06/22/15	5	47.5				
06/23/15	5	47.5				
06/24/15	6	57.0	12.6	100	12.3	97.0
06/25/15	6	57.0	12.6	98	12.3	98.0
06/26/15						
06/27/15						
06/28/15						
06/29/15						
06/30/15						
Minimum			12.3	65	12.2	94.0
Maximum			12.6	100	12.3	100.0
Total	22	209.0				
Average	6	52.3				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 07/01/15 to 07/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
07/01/15			12.5	100	12.4	100.0
07/02/15			12.6	100	12.3	96.0
07/03/15						
07/04/15						
07/05/15						
07/06/15						
07/07/15						
07/08/15			12.6	100	12.3	100.0
07/09/15			12.5	100	12.2	94.0
07/10/15						
07/11/15						
07/12/15						
07/13/15						
07/14/15						
07/15/15			12.4	100	12.2	100.0
07/16/15			12.5	100	12.3	90.0
07/17/15						
07/18/15						
07/19/15						
07/20/15						
07/21/15						
07/22/15			12.5	100	12.6	100.0
07/23/15			12.5	100	12.2	96.0
07/24/15						
07/25/15						
07/26/15						
07/27/15						
07/28/15	10	95.0				
07/29/15	10	95.0	12.5	100	12.2	98.0
07/30/15						
07/31/15						
Minimum			12.4	65	12.2	90.0
Maximum			12.6	100	12.6	100.0
Total	20	190.0				
Average	10	95.0				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 08/01/15 to 08/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
08/01/15						
08/02/15						
08/03/15						
08/04/15						
08/05/15			12.5	100	12.3	98.0
08/06/15						
08/07/15						
08/08/15						
08/09/15						
08/10/15						
08/11/15						
08/12/15			12.6	100	12.2	100.0
08/13/15						
08/14/15						
08/15/15						
08/16/15						
08/17/15						
08/18/15						
08/19/15			12.5	100	12.3	98.0
08/20/15						
08/21/15						
08/22/15						
08/23/15						
08/24/15						
08/25/15						
08/26/15			12.6	100	12.4	100.0
08/27/15						
08/28/15	20	190.0				
08/29/15						
08/30/15						
08/31/15						
Minimum			12.5	65	12.2	98.0
Maximum			12.6	100	12.4	100.0
Total	20	190.0				
Average	20	190.0				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 09/01/15 to

09/30/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
09/01/15						
09/02/15			12.5	100	12.3	98.0
09/03/15						
09/04/15						
09/05/15						
09/06/15						
09/07/15						
09/08/15						
09/09/15			12.5	100	12.3	96.0
09/10/15						
09/11/15						
09/12/15						
09/13/15						
09/14/15						
09/15/15	7	66.5				
09/16/15	8	76.0	12.5	100	12.3	98.0
09/17/15			12.5	98	12.2	93.0
09/18/15						
09/19/15						
09/20/15						
09/21/15						
09/22/15						
09/23/15						
09/24/15						
09/25/15						
09/26/15						
09/27/15						
09/28/15						
09/29/15						
09/30/15				98		
Minimum			12.5	65	12.2	93.0
Maximum			12.5	100	12.3	98.0
Total	15	142.5				
Average	8	71.3				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 10/01/15 to 10/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
10/01/15						
10/02/15						
10/03/15						
10/04/15						
10/05/15	12	114.0				
10/06/15	2	19.0				
10/07/15			12.5	95	12.3	88.0
10/08/15						
10/09/15						
10/10/15						
10/11/15						
10/12/15						
10/13/15						
10/14/15			12.3	100	12.3	85.0
10/15/15						
10/16/15						
10/17/15						
10/18/15						
10/19/15						
10/20/15						
10/21/15			12.4	90	12.2	92.0
10/22/15						
10/23/15						
10/24/15						
10/25/15						
10/26/15						
10/27/15						
10/28/15			12.5	100	12.2	98.0
10/29/15			12.4	98	12.2	90.0
10/30/15						
10/31/15						
Minimum			12.3	65	12.2	85.0
Maximum			12.5	100	12.3	98.0
Total	14	133.0				
Average	7	66.5				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 11/01/15 to

11/30/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
11/01/15						
11/02/15						
11/03/15						
11/04/15						
11/05/15			12.4	100	12.3	97.0
11/06/15						
11/07/15						
11/08/15						
11/09/15						
11/10/15						
11/11/15	8	76.0	12.5	100	12.4	86.0
11/12/15						
11/13/15	6	57.0				
11/14/15						
11/15/15						
11/16/15						
11/17/15						
11/18/15			12.5	87	12.2	88.0
11/19/15						
11/20/15	16	152.0				
11/21/15						
11/22/15						
11/23/15						
11/24/15						
11/25/15			12.5	95	12.2	80.0
11/26/15						
11/27/15						
11/28/15						
11/29/15						
11/30/15						
Minimum			12.4	65	12.2	80.0
Maximum			12.5	100	12.4	97.0
Total	30	285.0				
Average	10	95.0				

Tennessee Department of Public Health
Division of Water Pollution Control
Report of Land Application of Biosolids
for the Period 12/01/15 to 12/31/15

Plant: Crossville Wastewater Treatment Facility
Owner: City of Crossville
Operator: US Filter Operating Services
NPDES # TN0024996

Date	Number Loads Hauled/Farm	Volume Tons	Initial pH	Initial Temperature	Minimum 72 Hr pH	Minimum 12 Hr Temperature
12/01/15						
12/02/15			12.6	99	12.3	58.0
12/03/15						
12/04/15						
12/05/15						
12/06/15						
12/07/15						
12/08/15						
12/09/15			12.6	92	12.3	88.0
12/10/15						
12/11/15						
12/12/15						
12/13/15						
12/14/15						
12/15/15						
12/16/15						
12/17/15			12.5	89	12.3	84.0
12/18/15						
12/19/15						
12/20/15						
12/21/15						
12/22/15						
12/23/15			12.6	88	12.3	81.0
12/24/15						
12/25/15						
12/26/15						
12/27/15						
12/28/15						
12/29/15						
12/30/15						
12/31/15						
Minimum			12.5	65	12.3	58.0
Maximum			12.6	99	12.3	88.0
Total						
Average						